

**REMARKS**

Claims 144, 146-147, 150 and 153 have been amended. Upon entry of this amendment, claims 142-153 and 157-164 will be pending. No claims fees are due as a result of this amendment.

**Basis for Amendments**

Claims 144 and 150 have been amended to correct minor typographical errors introduced into these claims by the previous amendment.

Claims 146-147 and 153 have been amended to list the proteolytic activities. Basis for this amendment is found in, for example, originally filed claim 21.

**The Election/Restriction Requirements**

The Examiner's indication that the applicant's arguments regarding the restriction requirement were deemed persuasive is hereby acknowledged with appreciation.

**Priority**

The Examiner indicated that the applicant's claim to benefit of U.S. patent application no. 08/338,501 under 35 U.S.C. 120 is defective on the basis that the present application does not share a common inventor with U.S. Patent application no. 08/338,501. This argument is based on the allegation that the copy Declaration from prior application 08/600,273, filed on December 31, 2003, in the present application is improper on the basis that this application, or a parent thereof, is a continuation-in-part of U.S. patent application 08/600,273.

Upon review of the benefit claims for the present application, it has been determined that there was an error in the benefit claims. The prior benefit claim indicated that U.S. Patent Application no. 09/303,375, filed on April 30, 1999, now abandoned; is a continuation-in-part of U.S. Patent Application no. 08/600,273, filed on February 8, 1996, when, in fact, U.S. Patent application no. 09/303,375 is a divisional of U.S. Patent application no. 08/600,273 since these applications contain the same text.

As a result of this, the copy of the declaration from U.S. patent application no. 08/600,273 filed on December 31, 2003, in the present application is a correct and proper declaration for this application. This application claims priority to the prior application and

thus this declaration is a proper declaration.

Accordingly, since the declaration submitted on December 31, 2003, from prior U.S. patent application 08/600,273 is a proper declaration and names Johan de Faire, Richard Franklin, John Kay and Ragnvald Lindblom as inventors, the present application has at least one common inventor with U.S. Patent application no. 08/338,501, which names Ragnvald Lindblom and Johan de Faire as inventors. Thus, the present application meets all requirements for claiming the benefit of prior U.S. Patent application no. 08/338,501 since there are at least two common inventors between the two applications.

It should be noted that the declaration filed on October 15, 2004, is not proper since it does not meet the requirements of 37 C.F.R. §1.48 for deletion of inventors from the application. As a result, the declaration filed on October 15, 2004, should not have been entered.

To the extent that this position conflicts with remarks made by the applicant in its submission dated September 6, 2006, the applicant apologizes for its inadvertent mistake in the September 6, 2006 submission. This mistake was made on the basis that the applicant overlooked two key facts in this very complicated chain of applications, namely, (1) that U.S. patent application 09/303,375 is actually a divisional of U.S. Patent application no. 08/600,273, and (2) that the declaration filed on October 15, 2004 should not have been entered since the submission enclosing the declaration did not meet the requirements of 37 C.F.R. §1.48 for deletion of inventors from the application.

Similarly, the present application contains two common inventors with PCT/SE93/00455, namely Ragnvald Lindblom and Johan de Faire, thus is properly entitled to the benefit of that application under 35 U.S.C. §365(c).

Since the applicant is entitled to the benefit of PCT/SE93/00455 under 35 U.S.C. §365(c), and PCT/SE93/00455 has a PCT filing date of 21 May 1993, which is within one year of the filing date of Swedish patent application 9201628-6 filed on 22 May 1992, the present application is also entitled to claim the benefit of Swedish patent application 9201628-6 filed on 22 May 1992 under 35 U.S.C. 119.

**Specification**

The Examiner objected to the specification on the basis that it contained handwritten changes on pages 2 and 36. Pages 2 and 36 have been amended to conform these pages to the requirements of 37 C.F.R. 1.121 in order to obviate this objection.

The amendment of July 1, 2004 and the subsequent supplemental amendments are considered to be correct since it is clear that the first page of the specification as originally filed is the title page and that the second page of the specification should be page 1 of the specification since the page number "2" appears on the third page of the specification as originally filed and all subsequent pages are sequentially numbered from there. Also, it is clear from the text of the amendment which page of the specification was indicated since the paragraph containing the benefit claims must be the first paragraph of the specification. Thus, the prior amendments to the first paragraph of the specification are considered proper and should be entered.

In view of the foregoing discussion regarding the declaration and indicating that the declaration filed on December 31, 2003 is proper, the statement of inventorship on the title page of the specification is proper and does not require amendment.

With respect to paragraph 7 of the Final Rejection, the applicant has responded to the Notice to Comply with Requirements for Patent Applications Containing Nucleotide Sequence And/or Amino Acid Sequence Disclosures herewith and has amended the specification to include a paper copy of the sequence listing in order to overcome this objection.

With respect to paragraph 8 of the Final Rejection, the disclosed amino acid combinations on page 2, lines 18-19 and 23 are generic to a plurality of sequences and thus do not require reference to a specific sequence listing. The sequence on page 2, line 26 identifies SEQ ID NO. 1, which is shown in the added paper copy of the sequence listing. Similarly, the sequence listings on page 36, as corrected by the present amendment, are identified by sequence ID NOS. for sequences in the added paper copy of the sequence listing. Page 43 of the specification has been amended to refer to SEQ ID NO. 1 in relation to the sequence listing found there. No sequence listings could be found on page 45 of the specification, which appears to refer to chemical compounds and not to specific sequences.

Favorable consideration and withdrawal of the objections to the specification is requested on this basis.

**The Rejections Under 35 U.S.C. §§102 and 103**

Claims 142-153 and 157-164 have been rejected under 35 U.S.C. §§102(b) and 103(a) over WO 93/24142. In view of the fact that the present application is entitled to claim priority to WO 93/24142, for the reasons given above, WO 93/24142 is not prior art against the present application and thus these rejections should be withdrawn.

Claims 142-150 and 159-164 have been rejected under 35 U.S.C. §103(a) as being unpatentable over U.S. Patent no. 4,837,009 (Ractliff), in view of U.S. Patent no. 4,963,491 (Hellgren) and EP 0 257 003 (Karlstrom). This rejection is traversed and reconsideration is requested for the reasons given below.

The Examiner relies on the statement in Karlstrom that krill derived hyaluronidases degrade glycosaminoglycan. The Examiner connects this to Ractliff on the basis that Ractliff indicates that plaque mass may become a complex extracellular matrix containing sulphated glucosamineglycans, proteoglycans, glycoproteins, sugar, proteins and lipids which aid in the process of bacterial agglutination. See col. 3, line 62 to col. 4, line 1 of Ractliff. However, this connection is too tenuous for a skilled person to draw the conclusion that it would be obvious to use krill enzymes to remove dental plaque.

First, the glucosamineglycans of Ractliff are sulphated. Karlstrom does not mention sulphated materials and thus the skilled person does not know whether krill enzymes will degrade the sulphated glucosamineglycans of Ractliff.

Second, the plaque described in Ractliff is a complex matrix of several materials falling into six different classes. The mere fact that an enzyme is known to degrade a form of one of the materials (i.e. glucosamineglycans rather than sulphated glucosamineglycans), is insufficient to indicate to a skilled person that the same krill enzyme would be able to degrade the complex matrix of materials which forms the dental plaque. In fact, degradation of only the glucosamineglycan component might not provide any significant effect on dental plaque. Thus, from the information provided by the Examiner, the skilled person cannot conclude that krill enzymes would be effective for the treatment of dental plaque. Favorable consideration and withdrawal of the rejection is requested.

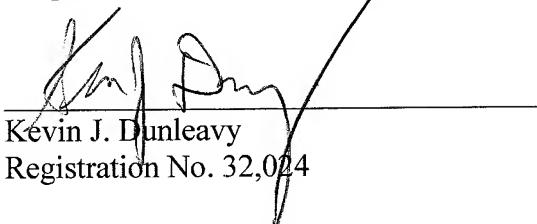
**Double Patenting**

Claims 146-147 have been amended to clarify the scope of these claims and ensure that they are proper dependent claims. It is considered that these amendments overcome the objection to these claims.

Each of claims 152, 153, 57 and 158 narrows the scope of the claim from which it depends and thus these claims are considered proper dependent claims. These claims do not recite features that are inherent to the entire scope of the subject matter of the claims from which they depend and thus properly further limit the scope of the claims from which they depend. Withdrawal of the objection to these claims is requested.

Favorable consideration, entry of the amendment and issuance of a Notice of Allowance are requested.

Respectfully submitted,

  
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